

**REMARKS**

Claims 1, 4-7, 10-13 and 16 have been canceled. Claim 2 has been amended to include the limitations of claim 4 and to precisely recite the manufacturing method of the present invention. Claim 2 as amended corresponds to claim 4, if rewritten in independent form. Claims 3, 8, 9, 14 and 15 have been amended for precision of claim language and consistency with the amendments to claim 2.

Claims 1 to 3 and 14 to 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kub et al. (U.S. Patent No. 6,323,108; hereinafter "Kub"). The rejection as it applies to claims 1 and 16 is moot in view of the cancellation of these claims. The rejection as it applies to claim 2 and claims 3, 14 and 15, which depend directly or indirectly on claim 2, has been overcome by the amendment to claim 2 to include the limitations of claim 4. Claim 4 is not included in the 35 U.S.C. § 102(b) rejection.

Removal of the 35 U.S.C. 102(b) rejection of the claims is believed to be in order and is respectfully requested.

Claims 4 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kub in view of Otsuka et al. (JP 03-219000; hereinafter "Otsuka"). Applicants respectfully submit that the proposed modification of the method of Kub will not result in the

method of the present invention as originally recited in claim 4 and now recited in claim 2.

Kub is cited as disclosing a method as recited in claim 4 except that Kub uses KOH to etch silicon and does not disclose using an etching solution comprising ammonia and hydrogen peroxide of pH 9 or higher.

The position of the Office is that a solution of ammonia and hydrogen peroxide is an art-recognized equivalent for KOH in alkaline etching. Otsuka is cited in support of this position. The Office also takes the position that pH is a result-effective variable in etching and, thus, the use of a pH of 9 or higher is a matter of optimization absent a showing of new and unexpected results.

Applicants respectfully submit Kub does not disclose a method as recited in claim 4 with the exceptions noted above. Kub discloses a manufacturing method where an etching stop layer is provided on the thin layer (active layer) after bonding and the thin active layer is exposed by two types of etching, i.e., etching to expose the etch stop layer using aqueous KOH and etching of the etch stop layer using a solution of HF, hydrogen peroxide and acetic acid. Conversely, in the method of the present invention as recited in claim 2, etching using alkaline chemicals is applied to

a surface of an active layer, which layer has been formed over a support substrate by cleaving off a portion of an active layer wafer, to control the thickness of the active layer of the bonded substrate.

The modification of Kub according to the teachings of Otsuka as proposed by the Office will not result in the etching of the active material layer using an ammonia peroxide mix, but will result only in a first etching down to the etching stop layer using the ammonia peroxide mix. The etching stop layer must be etched with a different etching solution to provide the bonded substrate having an active layer.

Claims 8 to 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kub. Claims 10 to 13 have been cancelled. The rejection as it applies to claims 8 and 9 depends on the rejection of claim 2. Since claim 2 has been shown to be patentable, claims 8 and 9 are *prima facie* patentable.

Removal of the 35 U.S.C. 103(a) rejections of the claims is believed to be in order and is respectfully requested.

The foregoing is believed to be a complete and proper response to the Office Action dated August 15, 2007, and is believed to place this application in condition for allowance.

PATENT APPLN. NO. 10/550,761  
RESPONSE UNDER 37 C.F.R. §1.111

**PATENT  
NON-FINAL**

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to our Deposit Account No. 111833.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

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